

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Currently Amended) An information processing device for making communications through a communications processing device handling the communications, the information processing device comprising:

a bubble packet transmitter for transmitting a bubble packet via the communications processing device, the bubble packet being a packet for leaving a transmission history within the communications processing ~~device; and~~device;

a type determination packet transmitter for transmitting a type determination packet through the communication processing device, the type determination packet being a packet used for determining a type of the communications processing device;  
and

a detecting packet transmitter for transmitting a detecting packet via the communications processing device, the detecting packet being a packet used for detecting a position of a bubble packet transmission port defined as one of ports of the communications processing device used for transmitting the bubble packet, the detecting packet transmitted in a manner that a detecting packet transmission port where the detecting packet passes through becomes the same as or different from the bubble packet transmission port, depending on a type of the communications processing device which is determined based on the type determination packet.

2. (Original) The information processing device according to claim 1 further comprising a destination data receiver for receiving a destination data defined as information on a destination of the bubble packet, wherein

the bubble packet transmitter transmits the bubble packet according to the destination data.

3. (Cancelled).

4. (Currently Amended) The information processing device according to ~~claim 3~~claim 1 further comprising:

a type determination port data receiver for receiving a type determination port data defined as information indicating a position of a port of the communications processing device where the type determination packet passed through; and

a type determiner for determining a type of the communications processing device according to the type determination port data, wherein

the detecting packet transmitter transmits the detecting packet based on the type of the communications processing device determined by the type determiner.

5. (Previously Presented) The information processing device according to claim 1 further comprising a type data receiver for receiving a type data defined as information indicating a type of the communications processing device, wherein

the detecting packet transmitter transmits the detecting packet according to the type of the communications processing device indicated by the type data.

6. (Previously Presented) The information processing device according to claim 1 further comprising:

a bubble packet transmission port receiver for receiving a bubble packet transmission port data defined as information indicating a position of a bubble packet transmission port detected based on the detecting packet; and

an output unit for outputting the bubble packet transmission port data.

7. (Previously Presented) The information processing device according to claim 1 further comprising:

a detecting port data receiver for receiving a detecting port data defined as information indicating a position of a port of the communications processing device where the detecting packet passed through;

a bubble packet transmission port detector for detecting a position of the bubble packet transmission port according to a type of the communications processing device and the detecting port data; and

an output unit for outputting a bubble packet transmission port data defined as information indicating the position of the bubble packet transmission port detected by the bubble packet transmission port detector.

8. (Previously Presented) The information processing device according to claim 1, wherein

the detecting packet transmitter transmits detecting packets in a manner that a port of the communications processing device where at least one of the detecting packets passes through is the same as the bubble packet transmission port if the communications processing device is of cone type, and in a manner that the port of the communications processing device where the detecting packets passes through is different from the bubble packet transmission port if the communications processing device is of symmetric type.

9. (Previously Presented) The information processing device according to claim 1, wherein

the detecting packet transmitter transmits the detecting packet by using the same port as a port of the information processing device where the bubble packet is transmitted from, before or after transmission of the bubble packet if the communications processing device is of cone type.

10. (Previously Presented) The information processing device according to claim 1, wherein

the detecting packet transmitter repeats transmitting the detecting packet from a different port of the information processing device than ports used before for transmission of the prior packets until a position of the port, which is a first port, of the information processing device from which the detecting packet is transmitted matches with a position of a port, which is a second port, of the communications

processing device where the same packet passes through if the communications processing device is of port reuse type, and

the bubble packet transmitter transmits the bubble packet from the first port used for transmitting the detecting packet when the position of the first port matches with the position of the second port.

11. (Previously Presented) The information processing device according to claim 1, wherein

the detecting packet transmitter transmits the detecting packet by using the same port as a port of the information processing device where the bubble packet is transmitted from, before or after transmission of the bubble packet if the communications processing device is of port reuse type.

12. (Previously Presented) The information processing device according to claim 1, wherein

the detecting packet transmitter transmits detecting packets before and after transmission of the bubble packet, each from a different port in a manner that one of the detecting packets is transmitted from the same port used by the bubble packet transmitter for transmitting the bubble packet.

13. (Previously Presented) The information processing device according to claim 1, wherein

the detecting packet transmitter transmits detecting packets before and after transmission of the bubble packet if the communications processing device is of symmetric type.

14. (Original) The information processing device according to claim 13, wherein

the detecting packet transmitter transmits the detecting packet by using a newly allocated port in the information processing device if the communications processing device is of symmetric type.

15. (Original) The information processing device according to claim 12, wherein

the bubble packet transmitter transmits the bubble packet again if a position of the bubble packet transmission port cannot be detected,

the detecting packet transmitter transmits the detecting packet again if a position of the bubble packet transmission port cannot be detected, and

the retransmitted bubble packet and detecting packet are routed through a newly allocated port in the communications processing device.

16. (Previously Presented) The information processing device according to claim 1 further comprising a port number differential detecting packet transmitter for transmitting a port number differential detecting packet via the communications processing device, the port number differential detecting packet defined as a packet used for detecting a port number differential of the communications processing device, wherein

a position of the bubble packet transmission port is detected by using a port number differential of the communications processing device detected according to a position of a port of the communications processing device where the port number differential detecting packet passed through.

17.-18. (Cancelled).

19. (Original) An information processing method for making communications through a communications processing device handling the communications, the method comprising the steps of:

transmitting a bubble packet via the communications processing device, the bubble packet being a packet for leaving a transmission history within the communications processing device; and

transmitting a detecting packet via the communications processing device, the detecting packet being a packet used for detecting a position of a bubble packet

Application No.: 10/590,345  
Amendment dated: November 19, 2009  
Reply To Office Action of: September 16, 2009

MAT-8895US

transmission port defined as one of ports of the communications processing device used for transmitting the bubble packet, the detecting packet transmitted in a manner that a detecting packet transmission port where the detecting packet passes through becomes the same as or different from the bubble packet transmission port, depending on a type of the communications processing device.

20.-22. (Cancelled).